

Remarks

The Office Action dated July 26, 2005, and made final, has been carefully reviewed and the foregoing amendments have been made in consequence thereof. Specifically, claims 1-21 are now pending in this application, of which claims 1, 11 and 20 have been amended. It is respectfully submitted that the pending claims define allowable subject matter.

Additionally, Applicants respectfully submit that the grounds of rejection have not clearly developed to an extent wherein Applicants may judge the advisability of appeal. In such circumstances, the finality of the present Office Action is inappropriate. See MPEP § 706.07. Specifically, the present Final Office Action has been submitted after the Applicants Request for Continued Examination, and relies solely on prior art of record which has not been asserted by the Examiner in any previous Office Action, and Applicants have not yet been afforded an adequate opportunity to evaluate the merits of the case for further prosecution or appeal. Applicants note that the Pope '781 reference was made of record in the Office Action dated March 07, 2005, but was not cited against the claims. Given the nature of the amendments and arguments made in the Request for Continued Examination, there is no apparent reason how Applicants' Amendments made in the Request for Continued Examination could have necessitated the new ground of rejection.

Accordingly, Applicants request reconsideration and withdrawal of the finality of the Office Action and another full and fair opportunity to respond to any outstanding rejections in the case.

Notwithstanding the propriety of the finality of the instant Office Action, it is respectfully submitted, for the reasons set forth below, that the present claims are patentable over the cited art. Applicants therefore request reconsideration and withdrawal of the claim rejections set forth in the Final Office Action in light of the following remarks.

Claims 1-21 have been rejected under 35 USC § 102(b) as being anticipated by Pope et al. (WO 98/02942) ("Pope '942"). Claims 1-21 have also been rejected under 35 USC § 102(b) as being anticipated by Pope et al. (USP 6,135,781) ("Pope '781"). Pope '781 is a continuation

of US Patent Application No. 08/733,513 filed October 18, 1996. Pope '942 is a PCT Application of US Patent Application No. 08/733,513 filed October 18, 1996. As such, Pope '942 and Pope '781 are related. Applicants respectfully traverse these rejections for the reasons set forth hereafter.

Pope '942 and Pope '781 each describe interconnection devices, such as a plug 16 and a socket 26, each having multiple connector channels 24 and rows of contact elements 12. The contact elements 12 are pre-formed and received within the connector channels 24. When loaded into the connector channels 24, a portion of each contact element 12 is positioned along an external surface of the device 16, 26.

Applicants respectfully submit that each of Pope '942 and Pope '781 fail to teach each and every element in the claims. As explained by the Federal Circuit, the requirements of Section 102, which is generally referred to as "anticipation", requires a disclosure in a single piece of prior art of each and every limitation of a claimed invention. Apple Computer, Inc. v. Articulate Systems, Inc., 57 USPQ2d 1057, 1061 (Fed. Cir. 2000). A finding of anticipation requires that the publication describe all of the elements of the claims arranged as in the patented device. C.R. Bard, Inc. v. M3 Systems, Inc., 48 USPQ2d 1225, 1320 (Fed. Cir. 1998).

Applicants submit, as with the previously argued prior art reference Lin et al. (USP 5,451,158), each of Pope '942 and Pope '781 fail to teach abutting the contacts to the alignment rib such that the contacts are biased to ensure coplanarity of the contacts, as recited in claim 1; abutting and preloading the solder tails against the alignment rib to flex a portion of the contacts as recited in claim 11; flexing a portion of the contacts against the alignment rib as the contacts are inserted, thereby preloading the contacts against the alignment rib in a coplanar relationship with one another as recited in claim 16; and abutting a mounting portion of each contact with an alignment edge to create an internal biasing force in the mounting portion thereby ensuring coplanarity of the contacts as recited in claim 20. Rather, Pope '942 and Pope '781 are silent on such structures. However, in a continuing effort to place the application in condition for allowance, Applicants have amended each of claims 1, 11 and 20 to further clarify at least some of the differences between the claimed subject matter and the interconnection devices described in Pope '942 and Pope '781.

Claim 1 has been amended for clarity and recites a header assembly including “an insulative housing comprising a plurality of walls defining an interior cavity” and “a plurality of contacts within said cavity and extending through one of said walls to an exterior of said housing for surface mounting to a circuit board, wherein said insulating housing comprises at least one alignment rib extending on an exterior surface thereof, said contacts formed against said alignment rib and abutting said alignment rib, wherein when said contacts abut said alignment rib, said contacts are positioned between said alignment rib and a mounting surface of the circuit board, and said contacts are flexed by said alignment rib to create an internal biasing force to ensure coplanarity of said contacts for surface mounting to the circuit board.”

Neither Pope ‘942 nor Pope ‘781 describe nor suggest an insulating housing having an alignment rib, such that contacts are formed against the alignment rib as recited in claim 1. Rather, in contrast to the present invention, Pope ‘942 and Pope ‘781 describe an interconnection device having a plurality of preformed contacts inserted into connector channels. The contacts are not formed against any portion of the interconnection device.

Moreover, neither Pope ‘942 nor Pope ‘781 describe nor suggest an insulating housing having an alignment rib, such that when the contacts abut the alignment rib, the contacts are flexed by said alignment rib to create an internal biasing force to ensure coplanarity of the contacts for surface mounting to the circuit board as recited in claim 1. Rather, Pope ‘942 and Pope ‘781 are silent with respect to such a structure. In contrast, Pope ‘942 and Pope ‘781 merely describe an interconnection device having a plurality of preformed contacts inserted into connector channels. Accordingly, for at least the reasons set forth above, claim 1 is submitted to be patentable over either Pope ‘942 or Pope ‘781.

Claims 2-9 depend from independent claim 1. When the recitations of claims 2-9 are considered in combination with the recitations of claim 1, Applicants submit that dependent claims 2-9 likewise are patentable over either Pope ‘942 or Pope ‘781.

Claim 11 has been amended for clarity and recites a header assembly including “an insulative housing comprising a plurality of walls defining an interior cavity and a contact interface, and at least one alignment rib extending proximate said contact interface” and “a

plurality of contacts having contact sections and solder tail sections, said contact sections located within said interior cavity, said solder tail sections extending exterior to said contact interface for surface mounting to a circuit board, wherein said solder tails abut said alignment rib and are preloaded against said alignment rib to flex a portion of said contacts against said alignment rib as said contacts are installed into said housing, thereby creating an internal biasing force to ensure coplanarity of said solder tail sections for surface mounting to the circuit board, when said contacts are installed into said housing, said solder tails are positioned between said alignment rib and the circuit board.”

Neither Pope ‘942 nor Pope ‘781 describe nor suggest contacts having solder tails abutting an alignment rib and preloaded against the alignment rib to flex a portion of the contacts against the alignment rib as the contacts are installed into the housing, thereby creating an internal biasing force to ensure coplanarity of the solder tail sections for surface mounting to the circuit board. Rather, Pope ‘942 and Pope ‘781 are silent with respect to such a structure. In contrast, Pope ‘942 and Pope ‘781 merely describe an interconnection device having a plurality of preformed contacts inserted into connector channels. Accordingly, for at least the reasons set forth above, claim 11 is submitted to be patentable over either Pope ‘942 or Pope ‘781.

Claims 12-14 depend from independent claim 11. When the recitations of claims 12-14 are considered in combination with the recitations of claim 11, Applicants submit that dependent claims 12-14 likewise are patentable over either Pope ‘942 or Pope ‘781.

Claim 16 recites a method of assembling a surface mount header assembly, the assembly including an insulative housing including a plurality of walls defining an interior surface, an exterior surface and a plurality of contact apertures extending therebetween, the housing further including an alignment rib extending on the exterior surface, the assembly further including a plurality of electrical contacts, wherein the method includes “inserting the contacts through the contact apertures”, “flexing a portion of the contacts against the alignment rib as the contacts are inserted, thereby preloading the contacts against the alignment rib in a coplanar relationship with one another for surface mounting to a circuit board” and “orienting the alignment rib with a

mounting surface of the circuit board such that the contacts are positioned between the alignment rib and the mounting surface.”

Neither Pope ‘942 nor Pope ‘781 describe nor suggest flexing a portion of electrical contacts against an alignment rib as the contacts are inserted, thereby preloading the contacts against the alignment rib in a coplanar relationship with one another along a mounting surface of a circuit board for surface mounting to the circuit board as recited in claim 16. Rather, Pope ‘942 and Pope ‘781 are silent with respect to such a structure. In contrast, Pope ‘942 and Pope ‘781 merely describe an interconnection device having a plurality of preformed contacts inserted into connector channels. Accordingly, for at least the reasons set forth above, claim 16 is submitted to be patentable over either Pope ‘942 or Pope ‘781.

Claims 17-19 depend from independent claim 16. When the recitations of claims 17-19 are considered in combination with the recitations of claim 16, Applicants submit that dependent claims 17-19 likewise are patentable over either Pope ‘942 or Pope ‘781.

Claim 20 has been amended for clarity and recites a header assembly including “an insulative housing having a mounting face and comprising an alignment rib extending along the mounting face and having a planar alignment edge along the mounting face” and “a plurality of contacts positioned relative to said housing, such that a mounting portion of each of said contacts is positioned between the mounting face and a circuit board, and such that a mounting portion of each of said contacts abuts and is flexed by said alignment edge to create an internal biasing force in said mounting portion thereby ensuring coplanarity of said contacts along the mounting face.”

Neither Pope ‘942 nor Pope ‘781 describe nor suggest contacts having a mounting portion abutting and being flexed by an alignment edge of an alignment rib to create an internal biasing force in the mounting portion thereby ensuring coplanarity of the contacts along a mounting face of an insulative housing. Rather, Pope ‘942 and Pope ‘781 are silent with respect to such a structure. In contrast, Pope ‘942 and Pope ‘781 merely describe an interconnection device having a plurality of preformed contacts inserted into connector channels. Accordingly,

for at least the reasons set forth above, claim 20 is submitted to be patentable over either Pope '942 or Pope '781.

Claim 21 depends from independent claim 20. When the recitations of claim 21 are considered in combination with the recitations of claim 20, Applicants submit that dependent claim 21 likewise is patentable over either Pope '942 or Pope '781.

For the reasons set forth above, Applicants respectfully request that the Section 102 rejection of claims 1-21 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



Jay J. Hoette
Registration No. 50,666
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070